A SYSTEM AND METHOD FOR EXCH ANGING DATA & COMMANDS

BETWEEN AN OBJECT ORIENTED SYSTEM AND A RELATIONAL SYSTEM

ABSTRACT OF THE DISCLOSURE

A system for exchanging data and commands between an object oriented system and a relational system. The system includes an Object-Relational Mapping (ORM) grammar, an ORM specification, Object Class Definitions, a relational database, an operating system, a Database Exchange Unit including an OR mapping unit, a schema generator, a schema reverse engineering unit and applications. The ORM specification is based on the ORM grammar and includes information for defining the mapping between object-oriented system and the relational system. The Object Class Definitions define the object-oriented system, and the relational database defines the relational system. The Database Exchange Unit executes in accordance with the ORM specification, and is the programs/routines that operate to translate data from the object model to the relational model, and vice versa. The present invention further comprises a number of methods including: a method for generating a ORM Data Structures; a method for generating a mapping unit; a method for generating a schema from an object model and an object-relational mapping specification; a method for generating an Object Class Definitions and an ORM specification from an ORM template specification and database schema; and a method for object streaming, and methods for efficient generation of persistently unique sequence numbers for new objects.